

minimum bursting pressure of 500 p.s.i.g.

(c) Hose shall be protected by wire braid or its equivalent.

(d) Nozzles and reservoirs shall be sufficient in number to provide maximum protection to each belt, belt takeup, electrical controls, and gear reducing unit.

(e) Each belt shall be protected on the top surface of both the top and bottom belts and the bottom surface of the top belt.

**§ 75.1101-16 Dry powder chemical systems; sensing and fire-suppression devices.**

(a) Each self-contained dry powder chemical system shall be equipped with sensing devices which shall be designed to activate the fire-control system, sound an alarm and stop the conveyor drive motor in the event of a rise in temperature, and provision shall be made to minimize contamination of the lens of any optical sensing device installed in such system.

(b) Where sensors are operated from the same power source as the belt drive, each sensor shall be equipped with a standby power source which shall be capable of remaining operative for at least 4 hours after a power cut-off.

(c) Sensor systems shall include a warning indicator (or test circuit) which shows it is operative.

(d) Each fire-suppression system shall be equipped with a manually operated control valve which shall be independent of the sensor.

**§ 75.1101-17 Sealing of dry powder chemical systems.**

Each dry powder chemical system shall be adequately sealed to protect all components of the system from moisture dust, and dirt.

**§ 75.1101-18 Dry powder requirements.**

Each dry powder chemical system shall contain the following minimum amounts of multipurpose dry powder:

Belt	Dry powder, pounds
Fire resistant .....	125
Non-fire resistant .....	250

**§ 75.1101-19 Nozzles; flow rate and direction.**

The nozzles of each dry powder chemical system shall be capable of discharging all powder within 1 minute after actuation of the system and such nozzles shall be directed so as to minimize the effect of ventilation upon fire control.

**§ 75.1101-20 Safeguards for dry powder chemical systems.**

Adequate guards shall be provided along all belt conveyors in the vicinity of each dry powder chemical system to protect persons whose vision is restricted by a discharge of powder from the system. In addition, hand-rails shall be installed in such areas to provide assistance to those passing along the conveyor after a powder discharge.

**§ 75.1101-21 Back-up water system.**

One fire hose outlet together with a length of hose capable of extending to the belt drive shall be provided within 300 feet of each belt drive.

**§ 75.1101-22 Inspection of dry powder chemical systems.**

(a) Each dry powder chemical system shall be examined weekly and a functional test of the complete system shall be conducted at least once each year.

(b) Where the dry powder chemical system has been actuated, all components of the system shall be cleaned immediately by flushing all powder from pipes and hoses and all hose damaged by fire shall be replaced.

**§ 75.1102 Slippage and sequence switches.**

[STATUTORY PROVISIONS]

Underground belt conveyors shall be equipped with slippage and sequence switches.

**§ 75.1103 Automatic fire warning devices.**

[STATUTORY PROVISIONS]

On or before May 29, 1970, devices shall be installed on all such belts which will give a warning automatically when a fire occurs on or near

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such belt. The Secretary shall prescribe a schedule for installing fire suppression devices on belt haulageways.

### § 75.1103-1 Automatic fire sensors.

A fire sensor system shall be installed on each underground belt conveyor. Sensors so installed shall be of a type which will (a) give warning automatically when a fire occurs on or near such belt; (b) provide both audible and visual signals that permit rapid location of the fire.

### § 75.1103-2 Automatic fire sensors; approved components; installation requirements.

(a) The components of each automatic fire sensor required to be installed in accordance with the provisions of § 75.1103-1 shall be of a type and installed in a manner approved by the Secretary, or the components shall be of a type listed, approved and installed in accordance with the recommendations of a nationally recognized testing laboratory approved by the Secretary.

(b) Where applicable, and not inconsistent with these regulations, automatic fire sensors shall be installed in accordance with the recommendations set forth in National Fire Code No. 72A "Local Protective Signaling Systems" (NFPA No. 72A-1967). National Fire Code No. 72A (1967) is hereby incorporated by reference and made a part hereof. National Fire Code No. 72A is available for examination at each MSHA Coal Mine Safety and Health district office, and may be obtained from the National Fire Protection Association, 11 Tracy Drive, Avon, MA 02322; Telephone: 800-344-3555 (toll free); <http://www.nfpa.org>.

[37 FR 16546, Aug. 16, 1972, as amended at 71 FR 16668, Apr. 3, 2006]

### § 75.1103-3 Automatic fire sensor and warning device systems; minimum requirements; general.

Automatic fire sensor and warning device systems installed in belt haulageways of underground coal mines shall be assembled from components which meet the minimum requirements set forth in §§ 75.1103-4 through 75.1103-7 unless otherwise approved by the Secretary.

[37 FR 16545, Aug. 16, 1972]

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### § 75.1103-4 Automatic fire sensor and warning device systems; installation; minimum requirements.

(a) Effective December 31, 2009, automatic fire sensor and warning device systems that use carbon monoxide sensors shall provide identification of fire along all belt conveyors.

(1) Carbon monoxide sensors shall be installed at the following locations:

(i) Not more than 100 feet downwind of each belt drive unit, each tailpiece transfer point, and each belt take-up. If the belt drive, tailpiece, and/or take-up for a single transfer point are installed together in the same air course, and the distance between the units is less than 100 feet, they may be monitored with one sensor downwind of the last component. If the distance between the units exceeds 100 feet, additional sensors are required downwind of each belt drive unit, each tailpiece transfer point, and each belt take-up;

(ii) Not more than 100 feet downwind of each section loading point;

(iii) Along the belt entry so that the spacing between sensors does not exceed 1,000 feet. Where air velocities are less than 50 feet per minute, spacing must not exceed 350 feet; and

(iv) The mine operator shall indicate the locations of all carbon monoxide sensors on the mine maps required by §§ 75.1200 and 75.1505 of this part.

(2) Where used, sensors responding to radiation, smoke, gases, or other indications of fire, shall be spaced at regular intervals to provide protection equivalent to carbon monoxide sensors, and installed within the time specified in paragraph (a)(3) of this section.

(3) When the distance from the tailpiece at loading points to the first outby sensor reaches the spacing requirements in § 75.1103-4(a)(1)(iii), an additional sensor shall be installed and put in operation within 24 production shift hours. When sensors of the kind described in paragraph (a)(2) of this section are used, they shall be installed and put in operation within 24 production shift hours after the equivalent distance which has been established for the sensor from the tailpiece at loading points to the first outby sensor is first reached.

(b) Automatic fire sensor and warning device systems shall be installed so